DAPQQxxx4000 – QSFP+ Passive Direct Attached Cable
50cm to 5m / 40x Gigabit Ethernet

For your product safety, please read the following information carefully before any manipulation of the cable:

ESD
This cable is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.

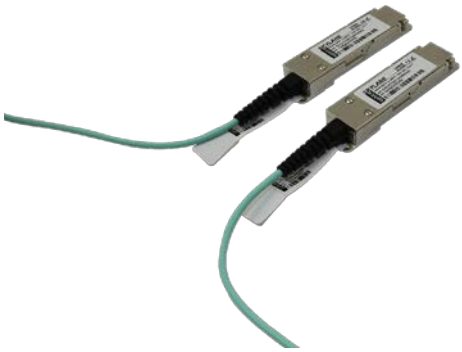
1. Overview

DAPQQxxx4000 is a high performance QSFP+ passive direct attached cable for full duplex 40Gbps data links. The device supports communication over up to 5m copper cable.

This Passive Direct Attached Cable is compliant with the Small Form-factor Pluggable (SFP) Multisource Agreement (MSA) and hot pluggable. Always contact Skylane Optics commercial agents for compatibility with different equipment platforms.

2. Features

- QSFP+ Multi-Source Agreement compliant SFF-8436
- Serial ID functionality supported according to SFF-8436
- 4 independent duplex channels at 10Gbps, 5 Gbps or 2.5Gbps.
- Up to 40Gbps Aggregated Data Rate
- Link Length up to 5m
- Low power consumption <0.5W
- Operating Case Temperature 0°C to 70°C
- RoHS Compliant



3. Applications

- Data center
- 40GBASE Ethernet links
- Fibre Channel
- Infiniband & Interconnects
- Switches and Routers

4. Technical parameters

4.1. Recommended Operating Conditions					
Parameter	**Min**	**Typ**	**Max**	**Unit**	**Notes**
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
Relative Humidity	-		85	%	Non condensing
Power Supply Voltage	3.15	3.3	3.4	V	
Power Supply Current	150			mA	
Power Dissipation			0.5	W	

4.2. General Specifications					
Parameter	**Min**	**Typ**	**Max**	**Unit**	**Notes**
Data Rate		40		Gbps	

4.3. High-speed Electrical Interface, Host to SFP+					
Parameter	**Min**	**Typ**	**Max**	**Unit**	**Notes**
Tx Input Impedance	90	100	110	Ω	Differential
Rx Output Impedance	90	100	100	Ω	Differential

5. Transceiver Electrical Pad Layout

QSFP+

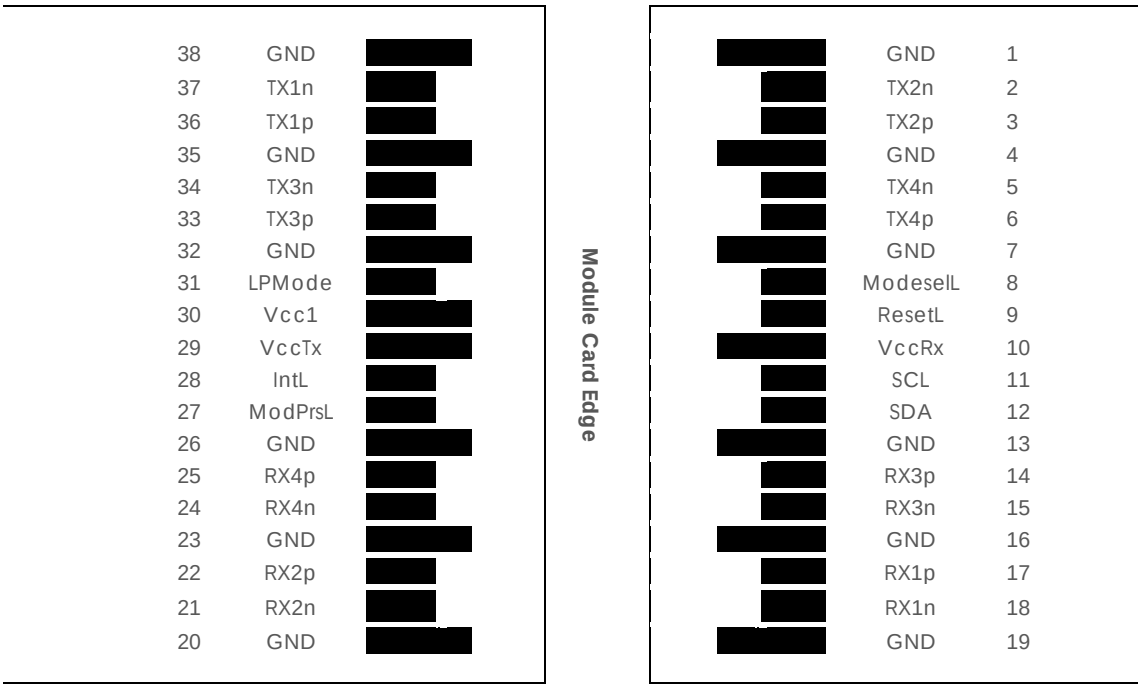


Figure 1. QSFP+ Transceiver Electrical Pad Layout

6. Pin Functions Definitions

QSFP+

Pin	Symbol	Description	Pin	Symbol	Description
1	GND	Ground	20	GND	Ground
2	TX2n	Transmitter Inverted Data Input	21	RX2n	Receiver Inverted Data Output
3	TX2p	Transmitter Non-Inverted Data Input	22	RX2p	Receiver Non-Inverted Data Output
4	GND	Ground	23	GND	Ground
5	TX4n	Transmitter Inverted Data Input	24	RX4n	Receiver Inverted Data Output
6	TX4p	Transmitter Non-Inverted Data Input	25	RX4p	Receiver Non-Inverted Data Output
7	GND	Ground	26	GND	Ground
8	ModSelL	Module Select	27	ModPrsL	Module Present
9	ResetL	Module Reset	28	Int	Interrupt
10	VccRx	Receiver Power Supply	29	VccTx	Transmitter Power supply
11	SCL	Two-Wire Serial Interface Clock (SCL)	30	Vcc1	Power supply
12	SDA	Two-wire Serial Interface Data (SDA)	31	LPMode	Low Power Mode
13	GND	Ground	32	GND	Ground
14	RX3p	Receiver Non-Inverted Data Output	33	TX3p	Transmitter Non-Inverted Data Input
15	RX3n	Receiver Inverted Data Output	34	TX3n	Transmitter Inverted Data Input
16	GND	Ground	35	GND	Ground
17	RX1p	Receiver Non-Inverted Data Output	36	TX1p	Transmitter Non-Inverted Data Input
18	RX1n	Receiver Inverted Data Output	37	TX1n	Transmitter Inverted Data Input
19	GND	Ground	38	GND	Ground

7. EEPROM

QSFP+ MSA[SFF-8436]

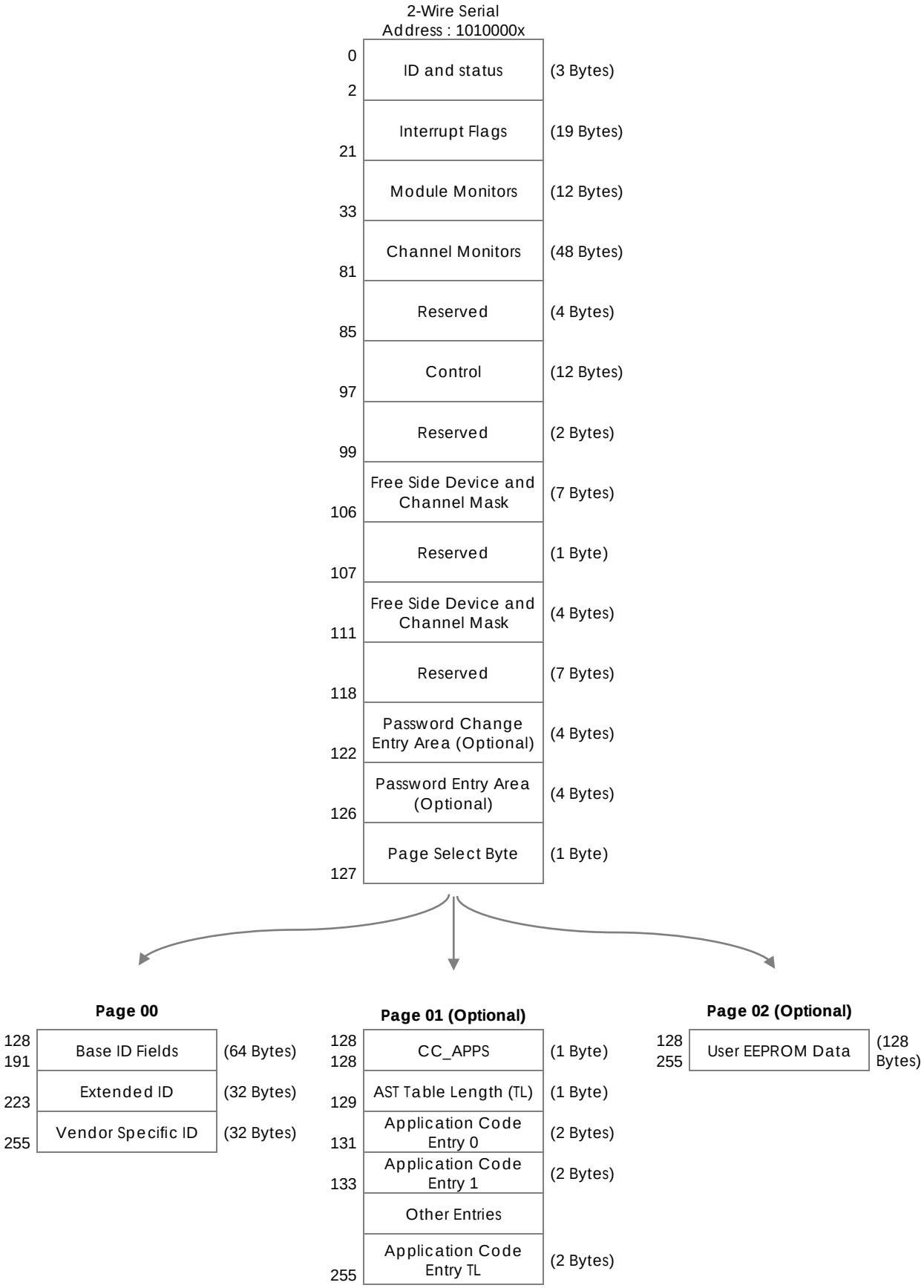


Figure 4. EEPROM of a QSFP+

Figure 5. EEPROM of a SFP+

8. Ordering information

Part Number	Description
DAPQQC504000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **50cm**, 0 to 70°C
DAPQQM014000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **1m**, 0 to 70°C
DAPQQM024000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **2m**, 0 to 70°C
DAPQQM034000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **3m**, 0 to 70°C
DAPQQM044000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **4m**, 0 to 70°C
DAPQQM054000	QSFP+ to QSFP+ passive cable, 40x Gigabit Ethernet, **5m**, 0 to 70°C

Skylane Optics supplies a broad range of optical transceivers. Our engineers work closely with our customers to find the best solutions for every application. We are committed to provide high quality products and services to our customers.

For questions on this product please contact:
support@skylaneoptics.com

